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EXAMINER
CRAIG, DWIN M

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No. 09/460,688	Applicant(s) PATIEJUNAS, KESTUTIS	
	Examiner Dwin M Craig	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-12 and 14-31* is/are rejected.

7)☒ Claim(s) *7 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 December 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-31 have been presented for examination. Claims 1-6, 8-12 and 14-31 have been examined and rejected. Claims 7 and 13 have been examined and objected to.

Specification

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

There are two claims with the same number.

The second misnumbered Claim 27 has been renumbered Claim 31.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Independent **Claim 1** and dependent **Claims 2, 4, 15 and 16** are being rejected under 35 U.S.C. 103(a) as being unpatentable over **Hanes et al. U.S. Patent 5,440,719** in view of **Somasegar et al. U.S. Patent 5,862,362.**

3.1 As regards Independent **Claim 1**, the *Hanes et al.* reference discloses a method of simulating connection characteristics of a network **(Figure 8, Col. 8 Lines 60-68, Col. 9 Lines**

1-7), calculating a send time for each of the network packets **(Col. 14 Lines 53-59),** sequencing the network packets to simulate a desired propagation connection characteristic **(Col. 19 Lines 12-20),** altering the stream of network packets to simulate an additional connection characteristic of the network **(Col. 20 Lines 29-39).**

However, the *Hanes et al.* reference does not expressly disclose providing a driver capable of accessing a stream of network packets.

The *Somasegar et al.* reference discloses a driver capable of accessing a stream of network packets **(Figure 3 Item 70 and Figure 4 Item 70, Col. 5 Lines 28-55).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hanes et al.* reference with the *Somasegar et al.* reference because, *(motivation to combine)* all network communications are routed through the NDIS interface layer and therefore a driver at that layer would have complete access to every protocol in the protocol layer stack thus providing a greater degree of accuracy for the network simulation ***(Somasegar et al. Col. 6 Lines 18-34).***

3.2 As regards dependent **Claim 2** the *Hanes et al.* reference discloses, a propagation connection characteristic that is a transmission delay **(Col. 20 Lines 29-39).**

3.3 As regards dependent **Claim 4** the *Hanes et al.* reference discloses packet length **(Figure 6B, 6C),** and packet send time **(Col. 14 Lines 53-59).**

3.4 As regards dependent **Claims 15 and 16** the *Hanes et al.* reference does not expressly disclose an NDIS intermediate driver.

The *Samasegar et al.* reference discloses an NDIS intermediate driver **(Figures 3 and 4).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hanes et al.* reference with the *Somasegar et al.* reference because, *(motivation to combine)* all network communications are routed through the NDIS interface layer and therefore a driver at that layer would have complete access to every protocol in the protocol layer stack thus providing a greater degree of accuracy for the network simulation ***(Somasegar et al. Col. 6 Lines 18-34).***

4. Dependent **Claims 3, 5, 8, 9, 10, 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hanes et al. U.S. Patent 5,440,719** in view of **Somasegar et al. U.S. Patent 5,862,362** and in further view of **Borella et al. U.S. Patent 6,422,141.**

4.1 As regard independent **Claim 1** and dependent **Claim 2** see paragraph **3.1** above.

4.2 As regards dependent **Claim 3** the *Hanes et al.* reference does not expressly disclose loss of a network packet.

The *Borella et al.* reference discloses the characteristic of the loss of a packet **(Figure 6, Col. 2 Lines 28-44).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified the *Hanes et al.* reference with the *Borrella et al.* reference because *(motivation to combine)* it would be desirable to provide a system capable of artificially creating stochastically accurate packet delay and loss to simulate actual network conditions ***(Borella et al. Col. 1 Lines 60-63).***

4.3 As regards dependent **Claim 5** the *Hanes et al.* reference does not expressly disclose adding a desired delay to the send time.

The *Borella et al.* reference discloses adding a desired delay to the send time **(Figure 6 ITEM 122, Col. 2 Lines 60-65).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified the *Hanes et al.* reference with the *Borrella et al.* reference because *(motivation to combine)* it would be desirable to provide a system capable of artificially creating stochastically accurate packet delay and loss to simulate actual network conditions ***(Borella et al. Col. 1 Lines 60-63).***

4.4 As regards dependent **Claim 8** the *Hanes et al.* reference does not expressly disclose dropping a packet.

The *Borrella et al.* reference discloses dropping a packet **(Col. 8 Lines 54-63).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified the *Hanes et al.* reference with the *Borrella et al.* reference because *(motivation to combine)* it would be desirable to provide a system capable of artificially creating stochastically accurate packet delay and loss to simulate actual network conditions ***(Borella et al. Col. 1 Lines 60-63).***

4.5 As regards dependent **Claims 9, 10 and 11** the *Hanes et al.* reference discloses packet fragmentation **(Col. 14 Lines 34-52).**

4.6 As regards dependent **Claim 12** the *Hanes et al.* reference discloses packet ordering **(Col. 7 Lines 54-67, Col. 8 Lines 1-5).**

5. Dependent **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hanes et al. U.S. Patent 5,440,719** in view of **Somasegar et al. U.S. Patent 5,862,362** and in further view of **Hashimoto et al. U.S. Patent 6,119,168.**

5.1 As regards independent **Claim 1** see paragraph **3.1** above.

5.2 As regards dependent **Claim 2** see paragraph **3.2** above.

5.3 As regards dependent **Claim 14** the *Hanes et al.* reference does not expressly disclose changing the network address of a packet.

The *Hashimoto et al.* reference discloses changing the network address of a packet **(Col. 4 Lines 10-54).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hanes et al.* reference with the *Hashimoto et al.* reference because *(motivation to combine)* the being able to convert network addresses allows the system described in the *Hashimoto et al.* reference to be used in a large number of communications systems and these systems can now be tested and simulated, ***(Hashimoto et al. U.S. Patent 6,119,168).***

6. Dependent **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hanes et al. U.S. Patent 5,440,719** in view of **Somasegar et al. U.S. Patent 5,862,362** and in further view of **Borella et al. U.S. Patent 6,422,141** and in further view of **K. Egevang and P. Francis "RFC 1631 The IP Network Adress Translator (NAT)"** hereafter reffered to as RFC 1631.

6.1 As regards independent **Claim 1** see paragraph **3.1** above.

6.2 As regards dependent **Claim 2** see paragraph **3.2** above.

6.3 As regards dependent **Claim 3** see paragraph **4.2** above.

6.4 As regards dependent **Claim 6** the *Hanes et al.* reference does not expressly disclose Network Address Translation (NAT).

RFC 1631 discloses Network Address Translation **(Pages 1-10).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hanes et al.* reference with RFC 1631 because, NAT is in wide use due to the fact that it provides a mechanism to preserve addesses and therefore any useful network simulation needs to include the ability of a firewall/router to perform NAT.

7. Independent **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hashimoto et al. U.S. Patent 6,119,168** in view of **Somasegar et al. U.S. Patent 5,862,362.**

7.1 As regards independent **Claim 17** the *Hashimoto et al.* refernece discloses a method of altering a network packet having an original network address and mapping the original network address to a simulated network address to create an address-modified network packet **(Figure 6, ITEM 22, Col. 9 Lines 51-59, Figure 11, Col. 3 Lines 30-53).**

However, the *Hashimoto et al.* refernece does not expressly disclose providing a driver that can access packet streams or modifying an additonal connection characteristic of a stream of network packets.

The *Somasegar et al.* reference discloses a driver capable of accessing a stream of network packets **(Figure 3 Item 70 and Figure 4 Item 70, Col. 5 Lines 28-55),** and modifying an additonal connection characteristic of a stream of network packets **(Figure 4 ITEMs 122 and 124, Col. 7 Lines 48-67).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hashimoto et al.* reference with the *Somasegar et al.* reference because, *(motivation to combine)* all network communications are routed through the NDIS interface layer and therefore a driver at that layer would have complete access to every protocol in the protocol layer stack thus providing a greater degree of accuracy for the network simulation ***(Somasegar et al. Col. 6 Lines 18-34).***

8. Dependent **Claims 18-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hashimoto et al. U.S. Patent 6,119,168** in view of **Somasegar et al. U.S. Patent 5,862,362** and in further view of **Egbert U.S. Patent 6,236,654.**

8.1 As regards independent **Claim 17** see paragraph **7.1** above.

8.2 As regards dependent **Claims 18-21** the *Hashimoto et al.* reference does not expressly disclose two-way mapping tables and two-way hash tables and mapping transmit and receive packets to the values stored in these tables.

The *Egbert* reference discloses two-way mapping tables **(Figures 6 and 8),** two-way hash tables **(Figures 9-18, Col. 10 Lines 66-67, Col. 11 Lines 1-23),** and mapping transmit and receive packets to the values stored in these tables **(Col. 6 Lines 4-24).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Hashimoto et al.* reference with the *Egbert* reference because, *(motivation to combine)* having a hash table to filter packets and update a table of which packets should be sent forward and which packets should be denied access to a particular subnet is an

efficient way to handle subnet filtering because hash values are easily indexed in a look up table ***(Egbert, Col. 1 Lines 65-67, Col. 2 Lines 1-30).***

9. Dependent **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hashimoto et al. U.S. Patent 6,119,168** in view of **Somasegar et al. U.S. Patent 5,862,362** and in further view of **Borella et al. U.S. Patent 6,442,141.**

9.1 As regards independent **Claim 17** see paragraph **7.1** above.

9.2 As regards dependent **Claim 22** the *Hashimoto et al.* reference does not expressly disclose packet loss.

The *Borella et al.* reference discloses packet loss **(Figure 6, Col. 2 Lines 28-44).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified the *Hashimoto et al.* reference with the *Borrella et al.* reference because *(motivation to combine)* it would be desirable to provide a system capable of artificially creating stochastically accurate packet delay and loss to simulate actual network conditions ***(Borella et al. Col. 1 Lines 60-63).***

10. Independent **Claim 23** and dependent **Claims 24 and 26-31** are being rejected under 35 U.S.C. 103(a) as being unpatentable over **Borella et al. U.S. patent 6,442,141** in view of **Hashimoto et al. U.S. Patent 6,119,168.**

10.1 As regards independent **Claim 23**, the *Borella et al.* reference discloses a network simulation system **(Col. 1 Lines 66-67 and Col. 2 Lines 1-16),** and a propagation module that alters a propagation connection characteristic of a network packet **(Figure 6, ITEM 122).**

However, the *Borella et al.* reference does not expressly disclose a modification module capable of accessing a network packet or an addressing module that replaces an original network address of a network packet with a simulated network address.

The *Hashimoto et al.* reference discloses a modification module capable of accessing a network packet or and addressing module that replaces an original network address of a network packet with a simulated network address **(Figure 1B, ITEM 200, Figures 2A-13, Col. 4 Lines 10-54).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Borella et al.* reference with the *Hashimoto et al.* reference because *(motivation to combine)* the ability to change the network address of a packet facilitates using the network simulator in different networks using different addressing schemes ***(Hashimoto et al. Col. 2 Lines 55-61).***

10.2 As regards dependent **Claim 24** the *Borrella et al.* reference discloses transmission delay **(Figure 6, ITEM 122).**

10.3 As regards dependent **Claim 26** the *Borello et al.* reference discloses a sequence module that alters a second characteristic of the network packet **(Figure 6 ITEM 120).**

10.4 As regards dependent **Claim 27** the *Borello et al.* reference discloses packet loss **(Figure 6, Col. 6 Lines 31-59).**

10.5 As regards dependent **Claim 31** the *Borello et al.* reference discloses storing the packet for a period of time **(Figure 6 ITEM 122).**

10.6 As regards dependent **Claim 28** the *Borello et al.* reference discloses an input queue and an output queue **(Figure 2).**

10.7 As regards dependent **Claims 29 and 30** the *Borello et al.* reference discloses a transmission module that send out a packet at a specified time **(Figure 6).**

11. Dependent **Claims 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Borella et al. U.S. patent 6,442,141** in view of **Hashimoto et al. U.S. Patent 6,119,168** and in further view of **Egbert U.S. Patent 6,236,654.**

11.1 As regards independent **Claim 23** see paragraph **10.1** above.

11.2 As regards dependent **Claim 25** the *Borella et al.* reference does not expressly disclose a two-way mapping table.

The *Egbert* reference discloses a two-way mapping table **(Figure 5).**

It would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified the *Borella et al.* reference with the *Egbert* reference because, *(motivation to combine)* having a hash table to filter packets and update a table of which packets should be sent forward and which packets should be denied access to a particular subnet is an efficient way to handle subnet filtering because hash values are easily indexed in a look up table ***(Egbert, Col. 1 Lines 65-67, Col. 2 Lines 1-30).***

Allowable Subject Matter

12. **Claims 7 and 13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M Craig whose telephone number is 703 305-7150. The examiner can normally be reached on 9:00 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

DMC
August 8, 2003

HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100